

FIRE
INSPECTION

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Automatic Sprinkler Systems

Quarterly Inspection and Tests

Year: 2005 System: wet sprinkler w/ fire pump
 Location: Kuyman Juvenile Det. center

Y = Satisfactory N = Unsatisfactory (explain below)

Date	4/12	7/12		
Inspector	RP	RP		
Main Drain Test Record the static water supply pressure in psi (bar) as indicated on the lower pressure gauge. Open the main drain and allow water flow to stabilize. Record the residual water supply pressure while water is flowing from the 2-in. (51-mm) main drain as indicated on the lower pressure gauge in psi (bar). Close the main drain (slowly).				
X				
Fire Department Connections Verify connection is visible and accessible, not damaged, caps or plugs are in place, identification sign is in place, and automatic drain is working properly.				
	Y	Y		
Wet Pipe System Flow Alarm Test water-flow alarms by opening the inspector's test valve. (Notify alarm company to avoid false alarms.)				
	Y	Y		
Dry Pipe Priming Level Check dry priming water level by opening the test valve and checking for a small amount of water to discharge. If no water flows out of the test line, add priming water.				
X				
Dry Pipe System Low-Air-Pressure Alarm Close the water supply valve and <i>carefully</i> open inspector's test valve to reduce air pressure <i>slowly</i> . (Do not reduce air pressure sufficiently to trip the dry pipe valve.) Confirm operation of low-pressure alarm, record air pressure at which low-pressure alarm activated, close inspector test, allow air pressure to rise to normal, then open water supply valve.				
X				
Dry Pipe System Flow Alarm Open the alarm bypass valve. (Notify alarm company to avoid false alarms.)				
X				
Quick-Opening Device Test in accordance with manufacturer's instructions.				
X				
Preaction System Flow Alarm Open the alarm bypass valve. (Notify alarm company to avoid false alarms.)				
X				
Deluge System Flow Alarm Open the alarm bypass valve. (Notify alarm company to avoid false alarms.)				
X				
Control Valves Close valves and reopen until spring or tension is felt—back valve $\frac{1}{4}$ turn.				
	Y	Y		
Hydraulic Nameplate If system was hydraulically calculated, assure nameplate is legible and securely attached to riser.				
	Y	Y		
Notes Record any notes about the system that the inspector believes to be significant. Place a number in this block and number the corresponding note on the reverse of this form.				
	1.	1. 2. 3. 4.		

POWELL FIRE SPRINKLER SERVICES

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**SPRINKLER SYSTEM MAINTENANCE LOG
KAGMAN JUVENILE DETENTION CENTER**

Date:07-12-05

FIRE PUMP: (ON) OFF

START PRESSURE: 50 psi. TIMES STARTED: 1

STOP: manual

JOCKEY PUMP: (ON) OFF

START PRESSURE: 80 psi. TIMES STARTED: 4

STOP: 100 psi.

INSP. TEST VALVE FLOW SWITCH TIMES:

MAINT. ADMIN. ED. BLDGS. TIME: 35 seconds

HOUSING 1st FLOOR TIME: 72 seconds

HOUSING 2nd FLOOR TIME: 45 seconds

WATER MOTOR ALARM TIME: N/A

PRESSURE SWITCH TIME: 10 seconds

ELEC. BELL FUNCTIONING: YES (NO)

PRESSURE RELIEF VALVE SETTING: 150 psi. TIMES TRIPPED: 0

OS&Y VALVES LUBRICATED: YES (NO)

FIRE PUMP PACKING ADJUSTED: YES (NO)

FIRE PUMP RUN THROUGH TEST LINE: YES (NO)

TAMPER SWITCHES FUNCTIONING: N/A

DATE: 7-12-05

TECHNICIAN: r. powell

NOTES:

1.water motor alarm not functioning, electric bell not functioning.2. generator starts when fire pump is shut off. 3. alarm time on housing 1st floor flow switch over 60 seconds. 4.ground faults in alarm system.

Figure 10-1(a) Contractor's material and test certificate for aboveground piping.

Contractor's Material and Test Certificate for Aboveground Piping									
PROCEDURE Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job. A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.									
Property name						Date			
KAGMAN DETENTION FACILITY						8-24-05			
Property address									
KAGMAN, SAIPAN CNMI									
Plans	Accepted by approving authorities (names)								
	SAIPAN								
	Address								
	Installation conforms to accepted plans <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Equipment used is approved <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, explain deviations								
Instructions	Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
	If no, explain?								
	Have copies of the following been left on the premises?								
	1. System components instructions <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 2. Care and maintenance instructions <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 3. NFPA 25 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
Location of system	Supplies buildings								
Sprinklers	Make	Model	Year of manufacture	Orifice size	Quantity	Temperature rating			
	STAR	INST	1	1/2		165			
	STAR			1/2		165			
Pipe and fittings	Type of pipe _____ Type of fittings _____								
Alarm valve or flow indicator	Alarm device					Maximum time to operate through test connection			
	Type	Make	Model	Minutes	Seconds				
	PRESSURE SWITCH				60				
Dry pipe operating test	Dry valve					Q. O. D.			
	Make	Model	Serial no.	Make	Model	Serial no.			
	Time to trip through test connection ¹		Water pressure	Air pressure	Trip point air pressure	Time water reached test outlet ¹		Alarm operated properly	
	Minutes	Seconds	psi	psi	psi	Minutes	Seconds	Yes	No
	Without Q.O.D.								
	With Q.O.D.								
	If no, explain								
	NA								

¹ Measured from time inspector's test connection is opened

SYSTEMS ACCEPTANCE

13-147

Figure 10-1(a) (Continued)

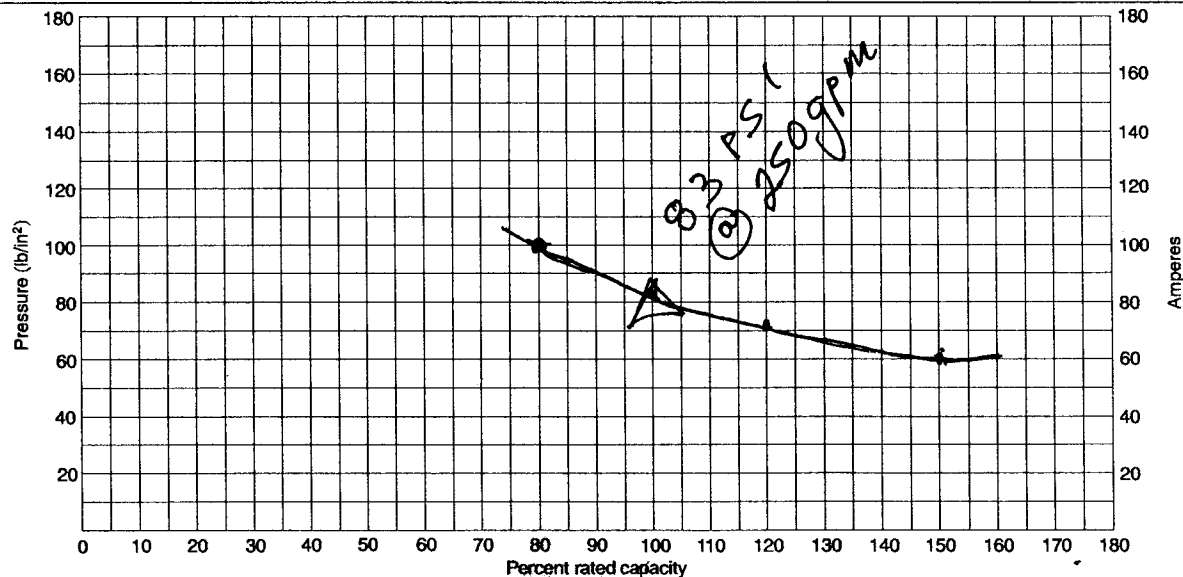
Deluge and preaction valves NA	Operation <input type="checkbox"/> Pneumatic <input type="checkbox"/> Electric <input type="checkbox"/> Hydraulics							
	Piping supervised <input type="checkbox"/> Yes <input type="checkbox"/> No				Detecting media supervised <input type="checkbox"/> Yes <input type="checkbox"/> No			
	Does valve operate from the manual trip, remote, or both control stations? <input type="checkbox"/> Yes <input type="checkbox"/> No							
	Is there an accessible facility in each circuit for testing? <input type="checkbox"/> Yes <input type="checkbox"/> No						If no, explain	
	Make	Model	Does each circuit operate supervision loss alarm? <input type="checkbox"/> Yes <input type="checkbox"/> No		Does each circuit operate valve release? <input type="checkbox"/> Yes <input type="checkbox"/> No		Maximum time to operate release Minutes Seconds	
Pressure reducing valve test NA	Location and floor	Make and model	Setting	Static pressure		Residual pressure (flowing)		Flow rate
				Inlet (psi)	Outlet (psi)	Inlet (psi)	Outlet (psi)	Flow (gpm)
Test description	<p>Hydrostatic: Hydrostatic tests shall be made at not less than 200 psi (13.6 bar) for 2 hours or 50 psi (3.4 bar) above static pressure in excess of 150 psi (10.2 bar) for 2 hours. Differential dry-pipe valve clappers shall be left open during the test to prevent damage. All aboveground piping leakage shall be stopped.</p> <p>Pneumatic: Establish 40 psi (2.7 bar) air pressure and measure drop, which shall not exceed 1½ psi (0.1 bar) in 24 hours. Test pressure tanks at normal water level and air pressure and measure air pressure drop, which shall not exceed 1½ psi (0.1 bar) in 24 hours.</p>							
	<p>All piping hydrostatically tested at <u>200</u> psi (___ bar) for <u>2</u> hours Dry piping pneumatically tested <input type="checkbox"/> Yes <input type="checkbox"/> No Equipment operates properly <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, state reason</p> <p>Do you certify as the sprinkler contractor that additives and corrosive chemicals, sodium silicate or derivatives of sodium silicate, brine, or other corrosive chemicals were not used for testing systems or stopping leaks? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>							
Tests	Drain test	Reading of gauge located near water supply test connection: <u>100</u> psi (___ bar)			Residual pressure with valve in test connection open wide: <u>100</u> psi (___ bar)			PUMP
	Underground mains and lead in connections to system risers flushed before connection made DS to sprinkler piping							
	Verified by copy of the U Form No. 85B flushed by installer of underground sprinkler piping				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		Other Explain	
	If powder-driven fasteners are used in concrete, has representative sample testing be satisfactorily completed?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If no, explain	
Blank testing gaskets	Number used <u>0</u>		Locations				Number removed	
Welding	Welding piping <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
	If yes...							
	Do you certify as the sprinkler contractor that welding procedures comply with the requirements of at least AWS B2.1?						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	Do you certify that the welding was performed by welders qualified in compliance with the requirements of at least AWS B2.1?						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Cutouts (discs)	Do you certify that the welding was carried out in compliance with a documented quality control procedure to ensure that all discs are retrieved, that openings in piping are smooth, that slag and other welding residue are removed, and that the internal diameters of piping are not penetrated?						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	Do you certify that you have a control feature to ensure that all cutouts (discs) are retrieved?						<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Figure A-11-2.6.3(f) Pump acceptance test data. (Courtesy of Factory Mutual Research Corp.)

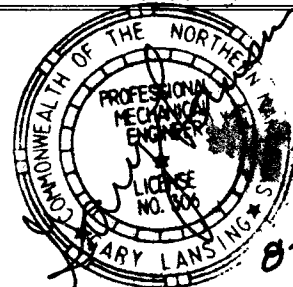
PUMP ACCEPTANCE TEST DATA Refer to P & P F(A) - 512.12 & DS 3-7N

PROPERTY OF		KAGMAN VENEUE DET. FAC				INDEX NO.		DIST. OFFICE			
ADDRESS						TESTED BY		DATE 8-24-05			
CITY		KAGMAN		STATE		SAIPAN CNMI		PLACO CODE			
SUBJECT						CONFERRED WITH					
PUMP	SHAFT <input type="checkbox"/> HORIZONTAL <input checked="" type="checkbox"/> VERTICAL		MANUFACTURER		APPROVED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		SHOP OR SERIAL NO.		MODEL OR TYPE		
	RATED GPM 250		RATED HEAD-FT. (psi) 83		RATED RPM 1765		SUCTION FROM TANK SIZE 30,000		TANK HEIGHT 14		
IF VERTICAL TYPE	VERTICAL DIST. DISCH. GAUGE TO WATER LEVEL		STATIC FT.		RIGHT-ANGLE GEAR DRIVE		MANUFACTURER		SHOP OR SERIAL NO.		
			PUMPING FT.				MODEL OR TYPE		APPROVED <input type="checkbox"/> YES <input type="checkbox"/> NO		
DRIVER	MANUFACTURER		APPROVED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		SHOP OR SERIAL NO.		MODEL OR TYPE		RATED H.P.		
	US MOTORS						VERT.		26		
	<input checked="" type="checkbox"/> ELECTRIC MOTOR		RATED VOLT. 460		OPERATING VOLT. 460		RATED EL. AMPS 32		AMPS AT 150% 36		
	<input type="checkbox"/> DIESEL ENGINE		<input type="checkbox"/> GASOLINE ENGINE		<input type="checkbox"/> GAS ENGINE		<input type="checkbox"/> STEAM TURBINE		<input type="checkbox"/> PRESS. GOVERNOR BUILT IN		
CONTROLLER	MANUFACTURER		APPROVED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		START 50 psi		STOP psi		JOCKEY PUMP		
	MASTER								ON 80 psi OFF 100 psi		
SPEED RPM		DISCHARGE PRESSURE PSI		SUCTION PRESSURE PSI		NET HEAD PSI		STREAMS		GALLONS PER MINUTE	
								NO. SIZE PITOT PRESSURE		PERCENT OF RATED CAPACITY	
1797		100		-						0 0%	
1760		90		-						200 80	
83										250 100	
76										300 120	
62										375 150	

Readings marked (+) in suction column are heads above atmosphere, those marked (-) are lifts.
For vertical shaft pumps omit suction pressure and net head readings.



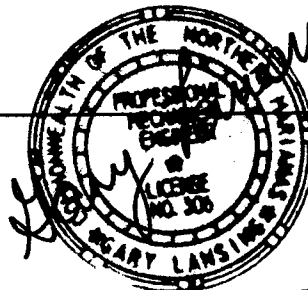
Plot discharge pressure and net head curves for horizontal shaft pump. For vertical shaft pump, plot discharge pressure curve. For electric-driven pump, plot ampere curve also.



8-24-05

Figure 10-1(a) (Continued)

Hydraulic data nameplate	Nameplate provided <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If no, explain
Remarks	Date left in service with all control valves open 8-24-2005	
Signatures	Name of sprinkler contractor RUSS POWELL FIRE SPRINKLER SERVICES	
	Tests witnessed by	
	For property owner (signed)	Title Date
	For sprinkler contractor (signed) Gary Lansing PE	Title Date 8-24-05
Additional explanations and notes		



8-24-2005